This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (original) A fluid flow control system for use with a fluid flow system for preventing a fluid that has reached a parametric limit from traveling to a point of use; the fluid flow control system including two units; namely,

a valve control unit; and

a hydraulic unit operably connected to the valve control unit;

whereby the hydraulic unit has first and second valves and plumbing pieces to connect the first and second valves to each other and the fluid flow system;

the first valve being a two-way valve that is either closed in a no-flow position or is open to direct fluid from the fluid flow system to drain when signaled to be at the appropriate state to open communication to a drain; and

the second valve is a two-way valve that is either open to flow through to the fluid flow system or may turn off flow to the fluid flow system when signaled to be at the appropriate state to close communication therewith.

2. (original) A system according to claim 1 wherein the parametric limit is a preset alarm limit.

3. (original) A system according to claim 1 wherein the first valve is a solenoid valve.

4. (original) A system according to claim 1 wherein the first valve is a normally closed valve.

5. (original) A system according to claim 1 wherein the first valve is a normally open valve.

6. (original) A system according to claim 1 wherein the first valve is a drain valve.

7. (original) A system according to claim 1 wherein the second valve is a solenoid valve.

8. (original) A system according to claim 1 wherein the second valve is a normally open valve.

9. (original) A system according to claim 1 wherein the second valve is a normally closed valve.

10. (original) A system according to claim 1 wherein the second valve is a to loop valve.

11. (original) A system according to claim 1 wherein the system is used in water treatment systems used for dialysis.

12. (original) A system according to claim 1 wherein the system is used in non-dialysis fluid systems in which a sensor-initiated diversion of fluid flow is desired.

13. (original) A system according to claim 1 wherein the fluid is deionized (DI) water.

14. (original) A system according to claim 1 wherein the system is used for preventing sub-standard quality water from reaching a point of use.

15. (original) A system according to claim 1 wherein the system is configured for use with a water quality monitor.

16. (original) A system according to claim 1 wherein the system is configured for use with a water quality monitor which has an alarm power output, whereby the system uses the alarm power output issued by the water quality monitor for activation of the valve control unit.

17. (original) A system according to claim 1 wherein the system includes a quality monitor and the valve control unit shares a fluid monitor alarm signal with a remote alarm assembly.

18. (original) A system according to claim 1 wherein the system includes a fluid monitor and the fluid monitor provides an AC signal for the alarm output.

19. (original) A system according to claim 1 wherein the system includes a fluid monitor and the valve control unit is connected to a source of power and the fluid monitor provides a signal for the valve control unit to provide appropriate power to one or more of the first and second valves.

20. (original) A system according to claim 1 wherein the valve control unit includes circuitry for valve activation, connection terminals, and LED indicators for the user.

21. (original) A system according to claim 1 wherein the valve control unit includes circuitry for LED indicators for through the valve continuity testing of the circuitry.

22. (original) A system according to claim 1 wherein the system includes a fluid quality monitor and the fluid quality monitor provides an alarm signal to the valve control unit that indicates that a fluid parameter has reached an alarm limit.

23. (original) A system according to claim 1 wherein the system includes a fluid quality monitor and the fluid quality monitor is a resistivity monitor which provides an alarm signal to the valve control unit that indicates that fluid resistivity has reached an alarm limit.

24. (original) A system according to claim 1 wherein the system includes a fluid quality monitor and the fluid quality monitor is a conductivity monitor which provides an alarm signal to the valve control unit that indicates that fluid conductivity has reached an alarm limit.

25. (withdrawn) A system according to claim 1 wherein the system includes a fluid quality monitor and the fluid quality monitor is a temperature monitor which provides an alarm signal to the valve control unit that indicates that fluid temperature has reached an alarm limit.

26. (withdrawn) A system according to claim 1 wherein the system includes a fluid quality monitor and the fluid quality monitor is a pressure monitor which provides an alarm signal to the valve control unit that indicates that fluid pressure has reached an alarm limit.

27. (withdrawn) A system according to claim 1 wherein the valve control unit activates both of the first and second valves which opens the flow of the fluid to drain through one of said first and second valves, while closing the flow of fluid to the main water circuit through the other of said first and second valves.

28. (original) A system according to claim 1 which provides a redundant fail safe wherein one of the first and second valves may fail during an alarm condition and yet provide for restricting the flow of sub-standard fluid away from the fluid flow system.

29. (original) A system according to claim 1 which provides a redundant fail safe wherein one of the first and second valves may fail during a non-alarm condition and yet provide for continuing to allow flow of fluid to the fluid flow system.

30. (original) A system according to claim 1 wherein a high impedance solid state relay is used to activate the valves.

31. (original) A system according to claim 1 wherein a rectifier circuit is disposed inside the valve control unit to provide direct current (DC) input to a solid state relay.

32. (original) A method for diverting a fluid that has reached a preset alarm limit from reaching the point of use; including:

flowing a fluid through a fluid system which includes a flow control system for preventing a fluid that has reached a preset alarm limit from reaching the point of use; the fluid flow control system including two units; namely,

a valve control unit; and

a hydraulic unit operably connected to the valve control unit;

whereby the hydraulic unit has first and second valves and plumbing pieces to connect the first and second valves to each other and the fluid system;

the first valve being a valve that directs water from the fluid flow system to drain when signaled to be at the appropriate state;

the second valve is a valve that when signaled to be at the appropriate state turns off flow through the fluid flow system; and

signaling the opening of the first valve; and the closing of the second valve to divert the fluid from the point of use to a drain.

33. (original) A method according to claim 32 which further includes a step for sensing when the fluid has reached a preset alarm limit.

34. (original) A method according to claim 32 wherein the alarm limit is for sub-standard quality deionized (DI) water.

35. (original) A method according to claim 32 which is used in water treatment systems used for dialysis.

36. (original) A method according to claim 32 in which the valve control unit uses a water quality monitor.

37. (original) A method according to claim 32 in which the valve control unit uses a water quality monitor; whereby water quality is defined by a parameter selected from the group consisting of: resistivity, conductivity, pressure, temperature and flow.

38. (original) A method according to claim 32 in which the valve control unit has a water quality monitor which has an alarm power output and the alarm issues an alarm output which activates the valve control unit.

39. (original) A method according to claim 32 wherein the Valve Control Unit (VCU) includes circuitry for valve activation, connection terminals, AC power connection and LED indicators for the user.

40. (original) A method according to claim 32 wherein the first valve is a normally closed solenoid valve which is connected to a drain.

41. (original) A method according to claim 32 wherein the second valve is a normally open solenoid valve which provides a connection to the fluid flow system.

42. (original) A method according to claim 32 wherein the fluid monitor provides an alarm signal to the Valve Control Unit that indicates that fluid quality has reached the alarm limit.

43. (original) A method according to claim 32 wherein the Valve Control Unit activates both of the first and second valves which opens the flow of the fluid to drain through the first valve, while closing the flow of fluid to the fluid system through the second valve.

44. (original) A method according to claim 32 wherein the Valve Control Unit shares the fluid monitor alarm signal with a remote alarm assembly.

45. (original) A method according to claim 32 wherein the Valve Control Unit shares the fluid monitor alarm signal with a remote alarm assembly and the remote alarm assembly is located in a dialysis treatment area.

46. (original) A method according to claim 32 wherein a high impedance solid state relay is used to activate the first and second valves.

47. (original) A method according to claim 32 wherein the fluid monitor provides an AC signal for the alarm output.

48. (original) A method according to claim 32 wherein a solid state relay and a rectifier circuit are disposed inside the Valve Control Unit, the rectifier providing a direct current (DC) input for the solid state relay.

49. (original) A method according to claim 32 wherein the system includes a fluid quality monitor and the fluid quality monitor provides an alarm signal to the valve control unit that indicates that a fluid parameter has reached an alarm limit and the valve control unit is connected to a source of AC power and thus provides AC power alarm output to power one or more of the first and second valves.

50. (original) A method according to claim 32 wherein the system includes a fluid quality monitor and the fluid quality monitor is a resistivity monitor which provides an alarm signal to the valve control unit that indicates that fluid resistivity has reached an alarm limit.

51. (original) A method according to claim 32 wherein the system includes a fluid quality monitor and the fluid quality monitor is a conductivity monitor which provides an alarm signal to the valve control unit that indicates that fluid conductivity has reached an alarm limit.

52. (withdrawn) A method according to claim 32 wherein the system includes a fluid quality monitor and the fluid quality monitor is a temperature monitor which provides an alarm signal to the valve control unit that indicates that fluid temperature has reached an alarm limit.

53. (withdrawn) A method according to claim 32 wherein the system includes a fluid quality monitor and the fluid quality monitor is a pressure monitor which provides an alarm signal to the valve control unit that indicates that fluid pressure has reached an alarm limit.

54. (withdrawn) A method according to claim 32 wherein the system includes a fluid quality monitor and the fluid quality monitor is a flow monitor which provides an alarm signal to the valve control unit that indicates that fluid flow has reached an alarm limit.

55. (original) A method according to claim 32 wherein the valve control unit activates both of the first and second valves which opens the flow of the fluid to drain through one valve, while closing the flow of fluid to the main water circuit through another valve.

Respectfully submitted,

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